

I. AMENDMENTS TO THE CLAIMS:

Please cancel claims 3, 7, 8 and 10 without prejudice. Kindly amend claims 1 and 12, and add new claims 14 and 15, as follows.

The present listing of claims replaces all prior listings or versions of claims in the above-captioned application.

LISTING OF CLAIMS:

1. (Currently Amended) A corrosion-resistant metal made sensor for measuring mass flow rate and pressure of fluid, comprising:

(a) a mass flow rate sensor part operable to measure mass flow rate of fluid and to provide a first output corresponding to the measured mass flow rate, the mass flow rate sensor part comprising

- i. a corrosion-resistant metal substrate; and
- ii. a thin film forming a temperature sensor and a heater installed on a back face side of a fluid contacting surface of the corrosion-resistant substrate; and

(b) a pressure sensor part operable to measure pressure of fluid and to provide a second output corresponding to the measured pressure, the pressure sensor part comprising a thin film forming a strain sensor element installed on the back face side of the fluid contacting surface of the corrosion-resistant metal substrate, wherein output drift of the mass flow rate sensor part, due to pressure changes of the fluid measured by the mass flow rate sensor part, is corrected by the second output of the pressure sensor part.

2. (Previously Presented) A corrosion-resistant metal made sensor as claimed in Claim 1, wherein the corrosion-resistant metal substrate is fitted into a mounting groove of a corrosion-resistant metal made sensor base so that the fluid contacting surface is exposed outwardly, and a peripheral edge of the corrosion-resistant metal substrate is hermetically welded to the sensor base.

3. (Cancelled)

4. (Previously Presented) A corrosion-resistant metal made sensor as claimed in Claim 1, wherein the thin film includes an insulation film formed on the back side of the fluid contacting surface of the corrosion-resistant metal substrate, a metal film that forms the temperature sensor, the heater and a strain sensor element, and a protection film covering the insulating film and the metal film.

5. (Previously Presented) A fluid supply device that employs the corrosion-resistant metal made sensor according to Claim 1 mounted on a fluid controller in order that flow rate and pressure of fluid is appropriately checked at a time of fluid control.

6. (Previously Presented) A fluid supply device that employs the corrosion-resistant metal made sensor according to Claim 2, wherein the sensor base is positioned inside a fluid passage of a body equipped with the fluid passage that communicates between a flow-in inlet for fluid and a flow-out outlet for the fluid by installing a metal gasket in order that hermeticity between the body and the sensor base is held by thrust by the metal gasket through mediation of the sensor base, and at the same time stiffness of a structural component disposed directly above the metal gasket relatively raises hermeticity between the body and

the sensor base, thus suppressing strain of the mass flow rate sensor part and the pressure sensor part caused by thrust by the metal gasket.

7. (Cancelled)

8. (Cancelled)

9. (Previously Presented) A corrosion-resistant metal made sensor as claimed in Claim 2, wherein the thin film includes an insulation film formed on the back side of the fluid contacting surface of the corrosion-resistant metal substrate, a metal film that forms the temperature sensor, the heater and a strain sensor element, and a protection film covering the insulating film and the metal film.

10. (Cancelled)

11. (Previously Presented) A fluid supply device that employs the corrosion-resistant metal made sensor according to Claim 2 mounted on a fluid controller in order that flow rate and pressure of fluid is appropriately checked at a time of fluid control.

12. (Currently Amended) A fluid supply device that employs the corrosion-resistant metal made sensor according to Claim 1 ~~Claim 3~~ mounted on a fluid controller in order that flow rate and pressure of fluid is appropriately checked at a time of fluid control.

13. (Previously Presented) A fluid supply device that employs the corrosion-resistant metal made sensor according to Claim 4 mounted on a fluid controller in order that flow rate and pressure of fluid is appropriately checked at a time of fluid control.

14. (NEW) A corrosion-resistant metal made sensor as claimed in Claim 1,
wherein the mass flow rate sensor part is disposed to provide the first output corresponding to
the measured mass flow rate to a first differential amplifying circuit, and the pressure sensor
part is disposed to provide the second output corresponding to the measured pressure to a
second differential amplifying circuit.

15. (NEW) A corrosion-resistant metal made sensor as claimed in Claim 14,
wherein the first differential amplifying circuit is disposed to output a third output to an offset
adjustment circuit, and the second differential amplifying circuit is disposed to output a
fourth output to a signal treatment circuit, and the signal treatment circuit is disposed to
output a fifth output to the offset adjustment circuit so that the output drift of the mass flow
rate sensor part, due to pressure changes of the fluid measured by the mass flow rate sensor
part, is corrected by the second output of the pressure sensor part.